

Claims

1. A digital tuner comprising:
 - a splitter for splitting a received RF (radio
5 frequency) signal into several RF signal outputs;
 - an IB (in-band) IF (intermediate frequency) unit for
converting an IB signal of the RF signal output into an IB IF
signal;
 - an OOB (out-of-band) IF unit for converting an OOB
10 signal of the RF signal output into an OOB IF signal.
2. The digital tuner according to claim 1, further
comprising a diplexer connected to a front port of the
splitter, for selectively outputting a transmission signal
15 and a reception signal.
3. The digital tuner according to claim 1, wherein the
IB IF unit comprises at least one or more IF units.
- 20 4. The digital tuner according to claim 1, further
comprising a demodulator for demodulating signals outputted
from the IB IF unit and/or the OOB IF unit.
- 25 5. The digital tuner according to claim 4, wherein the
demodulator is made by a semiconductor chip.
6. The digital tuner according to claim 1, wherein the
OOB IF unit comprises:
 - a filter for passing a signal of a predetermined band
30 out of an RF signal received through the splitter;
 - an attenuator for attenuating a level of an RF signal
outputted from the filter;
 - an OOB mixer for mixing a signal received through the
attenuator and an oscillation frequency signal received from
35 an outside into an OOB IF signal;
 - an OOB IF filter for passing only a signal of a desired

band out of the OOB IF signal outputted from the OOB mixer;
and

an OOB IF amplifier for amplifying an OOB IF signal
outputted from the OOB IF filter into an OOB IF signal of a
desired level.

7. The digital tuner according to claim 1, wherein the
OOB IF unit comprises an OOB mixer for mixing an oscillation
frequency signal received from an outside and an inputted
signal.

8. The digital tuner according to claim 1, wherein the
OOB IF unit comprises an OOB mixer for mixing an OOB signal
and an oscillation frequency signal, and a demodulator for
outputting an oscillation frequency of the OOB mixer is built
in the digital tuner.

9. The digital tuner according to claim 1, wherein the
IB IF unit comprises:

a first IF unit for up-converting a signal; and
a second IF unit for down-converting the signal from
the first IF unit.

10. The digital tuner according to claim 1, wherein the
OOB IF unit processes a data signal and the IB IF unit
processes audio/video signals.

11. The digital tuner according to claim 1, wherein a
signal inputted to the splitter is transmitted by a cable
and/or a sky wave and/or a satellite wave.

12. A digital tuner comprising:
a splitter for splitting a signal;
a filter for passing only a signal of a predetermined
band or below out of an RF signal received through the
splitter;

an attenuator for attenuating a level of an RF signal outputted from the filter;

an OOB mixer for mixing a signal received through the attenuator and an oscillation frequency signal received from an outside into an OOB IF signal;

an OOB IF filter for passing only a signal of a desired band out of the OOB IF signal outputted from the OOB mixer; and

an OOB IF amplifier for amplifying an OOB IF signal outputted from the OOB IF filter into an OOB IF signal of a desired level.

13. The digital tuner according to claim 12, further comprising a demodulator for demodulating a signal outputted through the OOB IF amplifier in the digital tuner and outputting the demodulated signal to a set.

14. The digital tuner according to claim 12, further comprising an IB IF unit connected to one of branch lines of the splitter, for converting an IB signal into an IF signal.

15. The digital tuner according to claim 14, wherein the IB IF unit comprises at least one or more IF units.

16. A digital tuner comprising:

a filter for passing only a signal of a predetermined band or below out of an RF signal;

an attenuator for attenuating a level of an RF signal outputted from the filter;

an OOB mixer for mixing a signal received through the attenuator and an oscillation frequency signal received from an outside into an OOB IF signal;

an OOB IF filter for passing only a signal of a desired band out of the OOB IF signal outputted from the OOB mixer; and

an OOB IF amplifier for amplifying an OOB IF signal

outputted from the OOB IF filter into an OOB IF signal of a desired level and outputting the amplified OOB IF signal through an OOB output line thereof.

5 17. A digital tuner comprising:
 a splitter for splitting a received signal into several
line signals;
 an OOB IF unit connected to at least one of output
lines of the splitter, for converting an OOB signal into an
10 IF signal.

 18. The digital tuner according to claim 17, further
comprising a demodulator for demodulating an IF signal
outputted from the OOB IF unit.

15 19. The digital tuner according to claim 17, further
comprising an IB IF unit in which at least one or more IF
units are formed, the IB IF unit being connected to one of
output lines of the splitter and converting an IB signal into
20 an IF signal.